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Feature Article - The Timeliness of Quarterly Income and Expenditure Accounts: An International Comparison

The timely and accurate production of a complex and interrelated set of accounts such as the quarterly Australian National Accounts inevitably involves compromises and trade-offs. A typical trade-off is the use of preliminary, rather than final, data from a particular collection in order to bring out the accounts in a timely manner. This, however, leaves the accounts subject to revision when the final data become available. New information, such as new or infrequent data collections, becoming available and the introduction of improved compilation methodology may also result in the need for revisions. Each country using the United Nations' A System of National Accounts as its framework adopts its own practices to deal with these revisions. Details of Australia's practice are included in **Australian National Accounts: Concepts, Sources and Methods** (ABS Catalogue No.5216.0).

The following article compares the revision practices of several national statistical agencies, including the ABS. It has been prepared by Philip Smith, the Director of the National Accounts and Environment Division of Statistics Canada. It is published here with the kind permission of Philip Smith and Statistics Canada.

This paper reports the results of an international survey of national income and expenditure accounts release date practices in national statistical bureaux. The survey was conducted by the author in January-March 1993 by means of a questionnaire mailed to statisticians of several countries.

Respondents to the survey were asked on what date their preliminary income and expenditure accounts estimates for each of the four quarters of calendar year 1991 were officially released. They were also asked to indicate the dates on which each of the subsequent four revised sets of estimates were released. To avoid the possibility of unwarranted generalizations from a single year's experience, respondents were asked whether the year 1991 was a typical one from this perspective, or there were special circumstances which affected the release dates in this particular period. Finally, general information was sought on each country's official revision policy.

RELEASE LAGS

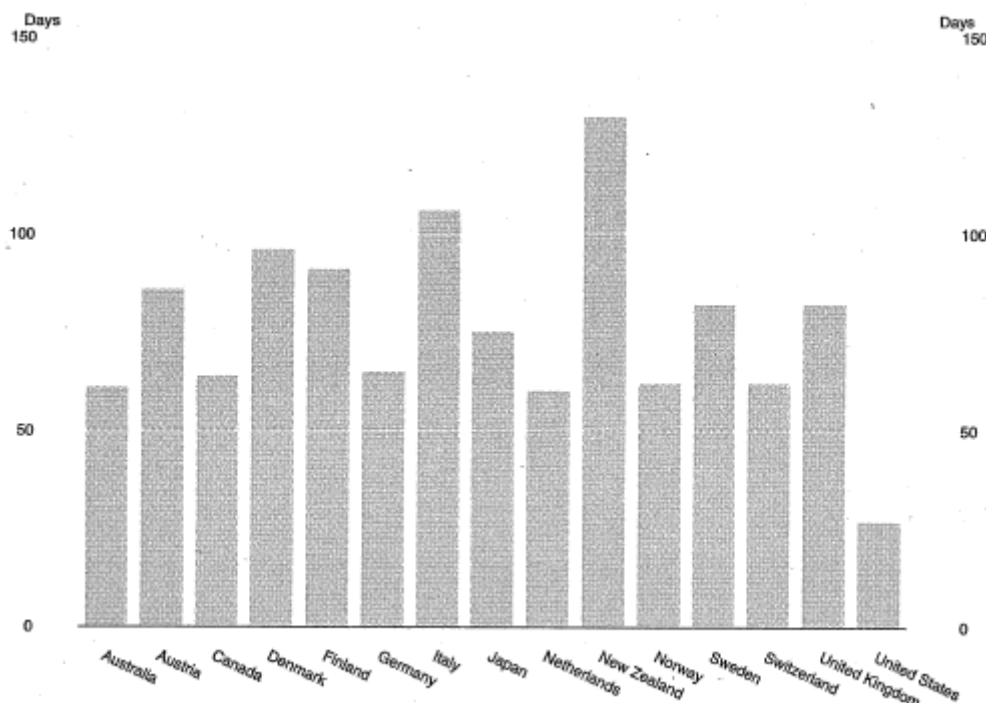
Fifteen countries provided the information which was sought, pertaining to release dates in 1991. (Endnote 1) Table 1 displays the average lag for each country calculated as the simple arithmetic mean of the release lags for the four quarters of the year. (Endnote 2) The basic data are reported in Table 2. A slightly different perspective is shown in Table 3, which presents the computed release lags in days. (Endnote 3) It is common for the release lag to vary over the four quarters of the year.

The release lags for the first estimates are of special interest since they show how long the public must wait before getting a first picture of the country's economic performance during the quarter. Statistical bureaux face a trade off here between timeliness and reliability, so it is interesting to

observe the various choices they make in this regard. The average release lags for the preliminary estimates are highlighted in Graph 1. Countries fall into five groups:

- One country, the **United States**, released its initial estimates within one month of the reference quarter. These estimates were incomplete in that they covered expenditure-based gross domestic product only; initial estimates of corporate profits, net interest, - national income and gross national product lagged by an additional month.
- Six countries, **Australia, Canada, Germany, the Netherlands, Norway and Switzerland**, released their first estimates two months after the reference quarter.
- Three countries, **Japan, Sweden and the United Kingdom** released their preliminary estimates around the middle of the third month after the reference quarter.(Endnote 4)
- Four countries, **Austria, Denmark, Finland and Italy**, released their initial estimates approximately three months after the reference quarter.
- Finally, one country, **New Zealand**, released its preliminary estimates about four and a half months after the reference quarter.

Graph 1. AVERAGE RELEASE LAG FOR FIRST ESTIMATES, 1992



The conclusions here, and in the rest of the paper, pertain to income and expenditure based estimates of GDP only. Other components of the System of National Accounts such as the financial flows are ignored. Some countries have more timely estimates of GDP which are based on the measurement of output by industry. These latter measures are not considered in this paper.

The release lags associated with the subsequent revised estimates also vary considerably by country. Once again, the **United States** stands out as a unique case, having released its second estimates about two months after the reference quarter and its third set of estimates one month after that. The **United States** is the only country with twelve, rather than four releases of its quarterly national accounts each year. The **Netherlands** also stands apart from other countries, with eight quarterly releases annually, its second estimates coming out 119 days after the reference quarter. Most countries released their second set of estimates, on average, between

145 and 190 days after the reference quarter. **Germany, New Zealand and Sweden** differ somewhat, with average release lags of 204, 216 and 210 days respectively for their second estimates, and **Austria and Switzerland** had the longest such lags at 248 and 289 days.

The lags applying to the third, fourth and fifth estimates, which are also shown in Table 3, differ even more widely and are best considered within the context of general revision policies, in the next section.

REVISION POLICIES

There are many commonalities to the revision policies of the fifteen countries included in the survey. Most impose fairly strict limitations on when and how frequently revisions are permitted, although two, **Australia and New Zealand**, have almost no restrictions. Most close their accounts after three or four years, allowing no further revisions thereafter except on special, infrequent occasions when historical revisions are carried out. The general pattern in the majority of countries is that the estimates for a particular quarter are open for revision when those for each of the other quarters in that same reference year are first released, and then annually thereafter for a period varying from two to four years.

Countries following this general pattern most closely include **Canada, Denmark, Finland, Japan, Norway and Sweden**. (Endnote 5) The following paragraphs describe the specific policies of each country, which the reader can also see illustrated for the year 1991 in Table 2.

Canada's revision policy is quite strict. Revisions are permitted for all quarters during the same calendar year. Thereafter, the accounts are open for revision only once per year, at the time of the release of the first quarter estimates in mid-June. They are open for four such annual revisions, after which time they are considered final and are not normally reopened except for historical revisions which typically occur about once per decade. The estimates at constant prices are converted to a new base period at intervals of roughly five years and this transformation is normally accomplished by chain linking, within the usual revision schedule.

In **Australia** there are few limitations on revisions. The annual revisions are generally most significant at the time of the release of the fourth quarter accounts in March and currently can go back as far as financial year 1985-86. At the time the second quarter estimates are released, annual revisions are normally, although not exclusively, limited to the previous four financial years. The annual revisions at the time when the first and third quarter estimates are released are normally limited to the latest complete financial year. The quarterly estimates are revised in tandem with the annual estimates and, in addition, are open to other revisions each quarter for up to three years.

In **New Zealand** there are no limitations on revisions, in part because the Department of Statistics has been releasing quarterly national accounts estimates for just a few years.

The **United Kingdom** revision policy is unique in that it always permits revisions to the quarters of the previous year as well as those of the current year. Annual revisions normally occur in September, when the second quarter estimates and the annual national accounts "Blue Book" are released, and cover the previous four years. At the time of the other three quarterly releases, normally in June, December and March, revisions are allowed in all quarters within the current and previous years, the "current" year being defined as the one in which the most recent Blue Book was published.

In the **United States** the first estimates, qualified as "advance", are released near the end of the first month after the end of the quarter. The second and third estimates, qualified as "preliminary" and "final", are released near the end of the second and third months respectively. Ordinarily,

annual revisions are carried out each July and cover the preceding three years. Comprehensive historical revisions are carried out at about five-year intervals. The revision dates reported by the United States for the 1991 estimates were not fully typical, for two reasons:

1. the fourth estimates for the first and second quarters of 1991 and the second estimate for the third quarter were delayed by 8 days due to the release of a comprehensive revision and
2. the fifth estimates for the third and fourth quarters were delayed by approximately 30 days due to a relocation of the bureau.

In **Germany** the quarterly estimates are open for revision in March, when the fourth quarter estimates are released, and annually thereafter in August or September, at the time of release of the second quarter estimates. They are open for three such annual revisions, after which time they are considered final and are not normally reopened except for historical revisions, which typically occur every 5 to 10 years.

In **Japan** the estimates for each quarter are open for revision when those for the subsequent quarter are released. Thereafter, the quarterly estimates are open for revision annually at the time of release of the third quarter estimates. They are open for two such annual revisions, after which time they are considered final and are not normally reopened except for historical revisions, which typically occur every 5 to 10 years.

In **Denmark** the accounts are normally open for revision in the following two quarters. Thereafter, they are normally open for revision only once a year, in January, following the compilation of the annual accounts in October. The estimates are open for three such annual revisions, after which time they are considered final.

In **Finland** the accounts are open for revision for all quarters during the same calendar year. Thereafter, they are open for revision twice per year, at the time of the release of the first and third quarter estimates. They are open for two years of such revisions, after which time they are considered final and are not normally reopened except in connection with changes in the base year which occur about once every five years.

In **Norway** the accounts are open for revision for all quarters during the same calendar year. Thereafter, they are open for revision only once during the year, in May, following the release of revised annual estimates. They are open for three such annual revisions, plus two more annual revisions after that which are attributable to the method used for adjusting the quarterly estimates to annual bench-mark totals.

In **Sweden** the accounts are open for revision for all quarters during the same calendar year. Thereafter, they are open for revision only once during the year, at the time of the release of the annual national accounts in October or November. They are open for two such annual revisions, after which time they are considered final and are not normally reopened except for historical revisions, which typically occur every 5 to 10 years.

In **Italy**, the revision policy is somewhat analogous to that of the United Kingdom in that, for the first three quarters, it allows revisions to the current year as well as the two previous years, provided the annual totals for those two years remain unchanged. At the time of the first quarter in April, just after the release of the annual revisions normally covering the past three years at the end of March, the quarterly estimates are open for revision for a period equal to $n + 2$ where n is the number of years for which the annual revisions were just carried. In 1991, the adoption of a new base year for the constant price estimates starting in 1970 has caused some delay in the release of the quarterly estimates which normally occurs three months after the end of the reference period.

The **Swiss** approach to revisions is unusual in that it draws a distinction between the original, unadjusted estimates and the seasonally adjusted estimates. -Annual revisions to the quarterly GDP estimates normally occur in late November or early December, when the third quarter estimates are released, and cover the previous two years. At the time of the other three quarterly releases the original estimates, without seasonal adjustment, are not open for revision. The seasonally adjusted quarterly estimates are fully open for revision in all quarterly releases.

In **Austria**, the estimates for the first three quarters are first revised with the release of the fourth quarter. All quarters are open for revision annually thereafter in June or July for three years. Comprehensive historical revisions are carried out at about ten year intervals.

In the **Netherlands**, a preliminary estimate of GDP growth is released about two months after the reference quarter. Revised, fully-based results (expenditure, production and income) come out about two months after that. When the fully-based results for the fourth quarter come out around the end of April the other quarters of the same year are also open for revision. The annual accounts are revised in August each year, for the previous three years, and the quarterly estimates are adjusted to the new annual levels with the release of the fully-based second quarter estimates.

CONCLUSION

Countries have different approaches with respect to timeliness and revision of the national income and expenditure accounts. In part, this is due to varying attitudes about the trade-off between timeliness and reliability, with some countries, such as the **United States**, putting a high premium on timeliness of the initial estimates and others, such as **New Zealand**, putting greater emphasis on their precision. The degree of experience with quarterly national accounting may be another factor accounting for the variance in release timing and revision policies.

The most common pattern is for countries to release their preliminary income and expenditure accounts estimates a little more than two months after the reference quarter, to revise these as the estimates for subsequent quarters of that calendar year are released, and to continue revising them on an annual basis for two to four years thereafter.

ENDNOTES

1. One other country, Spain, also responded to the survey but since it only started publishing quarterly national accounts estimates in 1992 it was unable to supply the requested information for 1991.
2. The average lags reported in Table 1 are most interesting for the first and second estimates. Those for the subsequent estimates say more about how often the estimates are revised than they do about release lags.
3. The release lag for a particular quarter is defined as the number of calendar days elapsed between the first day after the quarter and the release day. Thus, if the first quarter estimates were released on April 30, the release lag would be 29 days.
4. Beginning in 1993, the Central Statistical Office of the United Kingdom has increased the timeliness of its national accounts. A preliminary estimate of GDP, derived from output data, is released three to four weeks after the reference quarter. A second provisional estimate of GDP is released four weeks later, with the main income and expenditure components. A full set of national accounts becomes available twelve weeks after the reference quarter.
5. Information provided by Spain, relating to calendar year 1992, indicates that it too follows the general pattern just described. Spain allows revisions for all quarters in the same calendar year. Thereafter, revisions are permitted once a year at the end of June, with the

release of the first quarter estimates. The accounts are closed after three annual revisions.

APPENDIX

Table 1. NATIONAL INCOME AND EXPENDITURE ACCOUNTS AVERAGE RELEASE LAGS FOR 1991 BY COUNTRY

Country	Estimate				
	1st	2nd	3rd	4th	5th
Country	Days				
Australia	61	154	245	335	427
Austria	86	248	407	772	1,092
Canada	64	156	322	555	857
Denmark	96	187	307	614	974
Finland	91	184	298	439	599
Germany	65	204	387	570	799
Italy	106	194	286	376	465
Japan	75	166	384	749	977
Netherlands	60	119	256	483	802
New Zealand	130	216	315	406	497
Norway	62	146	299	519	816
Sweden	82	210	406	546	733
Switzerland	62	289	658	936	..
United Kingdom	82	173	265	356	446
United States	27	60	85	229	548

Table 2. NATIONAL INCOME AND EXPENDITURE ACCOUNTS RELEASE DATES FOR 1991 BY COUNTRY

Country	Quarter	1st	2nd	Estimate	3rd	4th	5th
Australia	1st	30-05-91	15-08-91	05-12-91	17-03-92	02-06-92	
	2nd	15-08-91	05-12-91	17-03-92	02-06-93	13-08-92	
	3rd	05-12-91	17-03-92	02-06-92	13-08-92	01-12-92	
	4th	17-03-92	02-06-92	13-08-92	01-12-92	18-03-93	
Austria	1st	29-06-91	28-03-92	27-06-92	28-06-93	28-06-94	
	2nd	28-09-91	28-03-92	27-06-92	28-06-93	28-06-94	
	3rd	20-12-92	28-03-92	27-06-92	28-06-93	28-06-94	
	4th	28-03-92	27-06-92	28-06-93	28-06-94	..	
Canada	1st	20-06-91	30-08-91	29-11-91	28-02-92	22-06-92	
	2nd	30-08-91	29-11-91	28-02-92	22-06-92	21-06-93	
	3rd	29-11-91	28-02-92	22-06-92	21-06-93	20-06-94	
	4th	28-02-92	22-06-92	21-06-93	20-06-94	19-06-95	
Denmark	1st	02-07-91	30-09-91	21-01-92	22-01-93	15-01-94	
	2nd	30-09-91	21-01-92	30-03-92	22-01-93	15-01-94	
	3rd	21-01-92	30-03-92	30-06-92	22-01-93	15-01-94	
	4th	30-03-92	30-06-92	22-01-93	15-01-94	15-01-94	
Finland	1st	03-07-91	30-09-91	31-12-91	30-03-92	10-07-92	
	2nd	30-09-91	31-12-91	30-03-92	10-07-92	29-12-92	
	3rd	31-12-91	30-03-92	10-07-92	29-12-92	15-07-93	
	4th	30-03-92	10-07-92	29-12-92	15-07-93	29-12-93	

Germany	1st	04-06-91	30-08-91	13-03-92	03-09-92	09-03-93
	2nd	30-08-91	13-03-92	03-09-92	09-03-93	07-09-93
	3rd	05-12-91	13-03-92	03-09-92	09-03-93	07-09-93
	4th	13-03-92	03-09-92	09-03-93	07-09-93	07-09-94
Italy	1st	20-07-91	09-10-91	15-01-92	17-04-92	08-07-92
	2nd	09-10-91	15-01-92	17-04-92	08-07-92	08-10-92
	3rd	15-01-92	17-04-92	08-07-92	08-10-92	12-01-83
	4th	17-04-92	08-07-92	08-10-92	12-01-93	08-04-93
Japan	1st	18-06-91	19-09-91	04-12-91	03-12-92	03-12-93
	2nd	19-09-91	04-12-91	03-12-92	03-12-93	..
	3rd	04-12-91	19-03-92	03-12-92	03-12-93	..
	4th	19-03-92	16-06-92	03-12-92	03-12-93	..
Netherlands	1st	30-05-91	25-07-91	30-10-91	27-04-92	27-10-92
	2nd	09-09-91	30-10-91	27-04-92	27-10-92	26-10-93
	3rd	25-11-91	30-01-92	27-04-92	27-10-92	26-10-93
	4th	27-02-92	27-04-92	27-10-92	26-10-93	25-10-94
New Zealand	1st	20-08-91	30-10-91	19-02-92	28-04-92	28-07-92
	2nd	30-10-91	19-02-92	28-04-92	28-07-92	30-11-92
	3rd	19-02-92	28-04-92	28-07-92	30-11-92	16-02-93
	4th	28-04-92	28-07-92	30-11-92	16-02-93	28-04-93
Norway	1st	10-06-91	09-09-91	09-12-91	10-02-92	11-05-92
	2nd	09-09-91	09-12-91	10-02-92	11-05-92	10-05-93
	3rd	09-12-91	10-02-92	11-05-92	10-05-93	10-05-94
	4th	10-02-92	11-05-92	10-05-93	10-05-94	10-05-95
Sweden	1st	25-06-91	24-09-91	16-12-91	23-03-91	18-11-92
	2nd	24-09-91	16-12-91	23-03-92	18-11-92	15-11-93
	3rd	18-12-91	23-03-92	18-11-92	15-11-93	..
	4th	23-03-92	18-11-92	15-11-93	..	..
Switzerland	1st	04-06-91	29-11-91	01-12-92	07-12-93	..
	2nd	30-08-91	29-11-91	01-12-92	07-12-93	..
	3rd	29-11-91	01-12-92	07-12-93	..	..
	4th	06-03-92	01-12-92	07-12-93	..	..
United Kingdom	1st	24-06-91	23-09-91	20-12-91	19-03-92	24-06-92
	2nd	23-09-91	20-12-91	19-03-92	24-06-92	23-09-92
	3rd	20-12-91	19-03-92	24-06-92	23-09-92	21-12-92
	4th	19-03-92	24-06-92	23-09-92	21-12-92	12-03-93
United States	1st	26-04-91	29-05-91	26-06-91	04-12-91	30-07-92
	2nd	28-07-91	28-08-91	26-09-91	04-12-91	30-07-92
	3rd	29-10-91	04-12-91	20-12-91	30-07-92	01-09-93
	4th	29-01-92	28-02-92	26-03-92	30-07-92	01-09-93

**Table 3. NATIONAL INCOME AND EXPENDITURE ACCOUNTS RELEASE LAGS FOR 1991
BY COUNTRY**

		Estimate				
		1st	2nd	3rd	4th	5th
Country	Quarter	Date				
Australia	1st	59	136	248	351	428
	2nd	45	157	260	337	409

	3rd	65	168	245	317	427
	4th	76	153	225	335	442
Austria	1st	89	362	453	818	1,183
	2nd	89	271	362	727	1,092
	3rd	80	179	270	635	1,000
	4th	87	178	544	909	..
Canada	1st	80	151	242	333	448
	2nd	60	151	242	357	721
	3rd	59	150	265	629	993
	4th	58	173	537	901	1,265
Denmark	1st	92	182	295	662	1,020
	2nd	91	204	273	571	929
	3rd	112	181	273	479	837
	4th	89	181	387	745	1,110
Finland	1st	93	182	274	364	466
	2nd	91	183	273	375	547
	3rd	91	181	283	455	653
	4th	89	191	363	561	728
Germany	1st	64	151	347	521	708
	2nd	60	256	430	617	799
	3rd	65	164	338	525	707
	4th	72	246	433	615	980
Italy	1st	110	191	289	382	464
	2nd	100	198	291	373	465
	3rd	106	199	281	373	469
	4th	107	189	281	377	463
Japan	1st	78	171	247	612	977
	2nd	80	156	521	886	..
	3rd	64	170	429	794	..
	4th	78	167	337	702	..
Netherlands	1st	59	115	212	392	575
	2nd	70	121	301	484	848
	3rd	55	121	209	392	758
	4th	57	117	300	664	1,029
New Zealand	1st	141	212	324	393	484
	2nd	121	233	302	393	518
	3rd	141	210	301	426	504
	4th	118	209	334	412	483
Norway	1st	70	161	252	315	406
	2nd	70	161	224	315	679
	3rd	69	132	223	587	952
	4th	40	131	495	860	1,225
Sweden	1st	85	176	259	357	597
	2nd	85	168	266	506	868
	3rd	76	174	414	776	..
	4th	82	322	684	..	..
Switzerland	1st	64	242	610	981	..
	2nd	60	151	519	890	..
	3rd	59	427	798	..	..
	4th	65	335	706	..	..

United Kingdom	1st	84	175	263	353	450
	2nd	84	172	262	359	450
	3rd	80	170	267	358	447
	4th	78	175	266	355	436
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United States	1st	25	58	86	247	486
	2nd	25	58	87	156	395
	3rd	28	64	80	303	701
	4th	28	58	85	211	609
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